

# The Job Corps Experience With Health Problems Among Disadvantaged Youth

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**SOCIALLY AND ECONOMICALLY DISADVANTAGED** young people have significant health problems that can lead to serious illness. Yet, the literature is sparse on analyses of the health problems or the relative effectiveness of various health care programs designed for this population.

The Job Corps, composed of young people who are socially and economically disadvantaged, provides a health program that seems to be effective for this population. Although we cannot offer the results of a systematic evaluation that illustrates Job Corps effectiveness, we describe the program, provide data on terminations for serious illness or injury, and offer our observations regarding the effectiveness of the health program.

Because little information is available on health care programs for this population, it may be helpful to share our information and our interpretation of it. From our

observations, it is clear that there is a need for systematic studies of the Job Corps and other health care programs for socially and economically disadvantaged young people.

## Prevalence of Health Problems

Available data on health problems among disadvantaged young people are difficult to assess. Many of these data are obtained from screening, surveys, or the initial or one-time assessment of a specified group, and they primarily reflect problems of an ambulatory population. Although serious health problems are noted, often it is not possible to assess the extent of ensuing disability. The studies did not include an analysis of how readily the problems were managed or how effective intervention was in ameliorating disease and disability.

Nevertheless, existing data indicate the prevalence of health problems among the socioeconomically disadvantaged in this age group. For example, more than half of those screened in a program for black adolescents in Harlem had one or more unresolved health problems that required referral for treatment (1). Of presumably healthy teenagers admitted to juvenile detention facilities in two centers in New York City, 46 percent were found to have "significant" health problems (2). In screening a group of 14- to 16-year olds from low-income families, researchers in another study found

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that 44.5 percent had physical abnormalities (3). Data from the National Health Survey also show a higher percentage of abnormal physical findings in lower income teenagers (4). Likewise, "Health, United States" reports that the proportion of children in "fair" or "poor" health drops significantly as family income rises (5). The findings of all these studies suggest that significant health problems exist among socioeconomically disadvantaged young people.

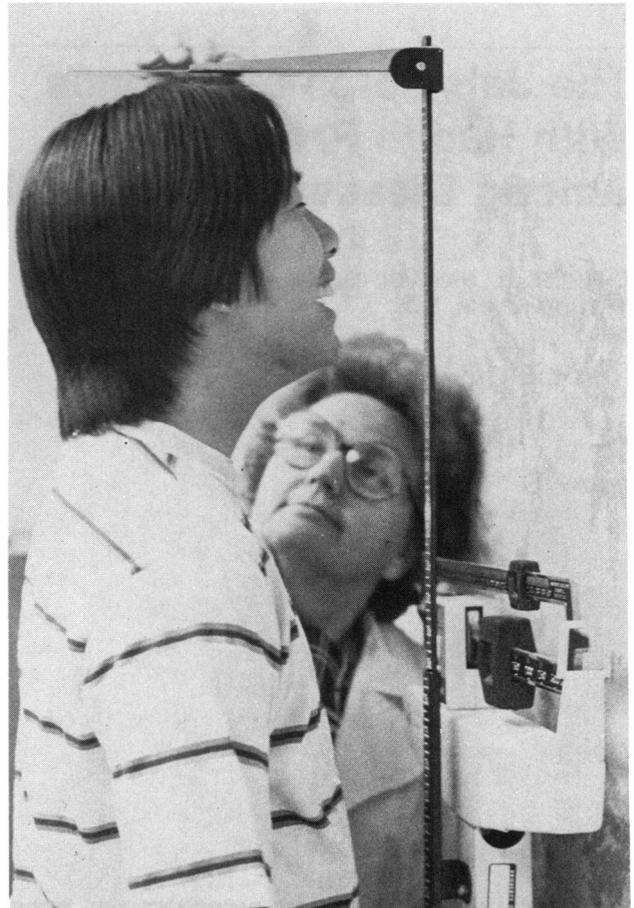
### **Overview of the Job Corps Program**

The Jobs Corps program was developed in 1964 by the Office of Economic Opportunity. Since 1969, the program has been administered by the Department of Labor. The program is designed to combat poverty, and it offers young people an intensive program of remedial education, vocational skills training, and complete support services in a residential setting. Through this program, corpsmembers are prepared to obtain and hold productive jobs, go on to further training or education, or both, or enter the armed services. During fiscal years 1978 and 1979, the Jobs Corps expanded rapidly, it now has an average enrollment of 29,000 corpsmembers: two-thirds are black and 32 percent are female. There are 85 centers, of which 57 are coeducational.

Although the main focus of the Job Corps program is on education and job training, support services are considered an integral part of the program. Job Corps centers provide nutritious meals, dormitory living, sports and other forms of recreation, counseling, and a fairly complete health program. All Job Corps activities are planned to motivate and support constructive attitudes and lifestyles that will prepare corpsmembers to function effectively after they leave the program.

The primary objective of the health program is to enhance a corpsmember's employment potential by establishing and maintaining the corpsmember at a satisfactory health level. The program tries to accomplish this objective through the provision of "comprehensive" health care and a health education program designed to instill good personal health habits and prevent illness and injury.

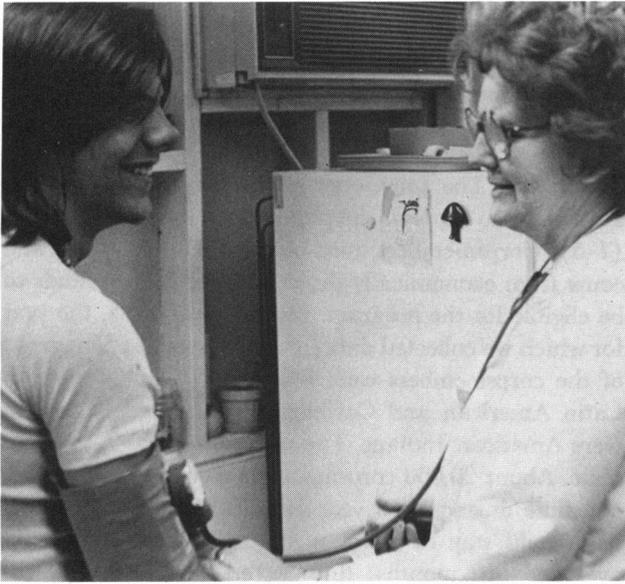
The preliminary screening procedure used to identify applicants who have serious health problems includes the completion of a health questionnaire during the applicant's interview with a screening clerk, who may or may not note obvious abnormalities. No effort is made to verify the accuracy of the completed questionnaires, although it is believed that a significant number are not completed accurately. The inaccuracies reflect either the applicant's incomplete knowledge of their health status or their conscious attempt to misrepresent their health status to avoid rejection.



*Height and weight measurements are part of corpsmember's physical examination*

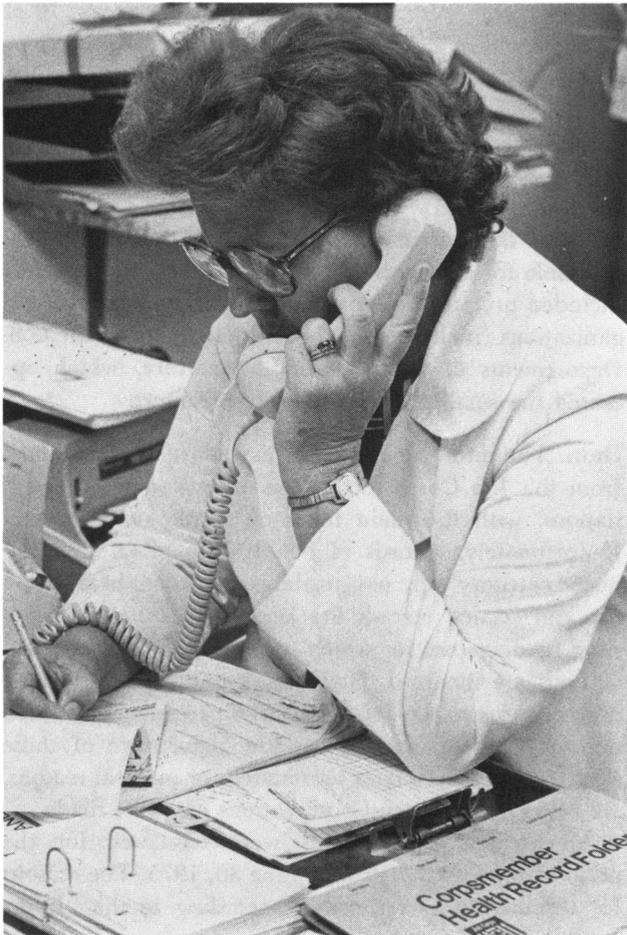
*Job Corps nurse visits corpsmember at a center infirmary*





*Corpsmember's blood pressure is taken during entrance physical examination*

*Job Corps nurse acquires information for corpsmember's health record*



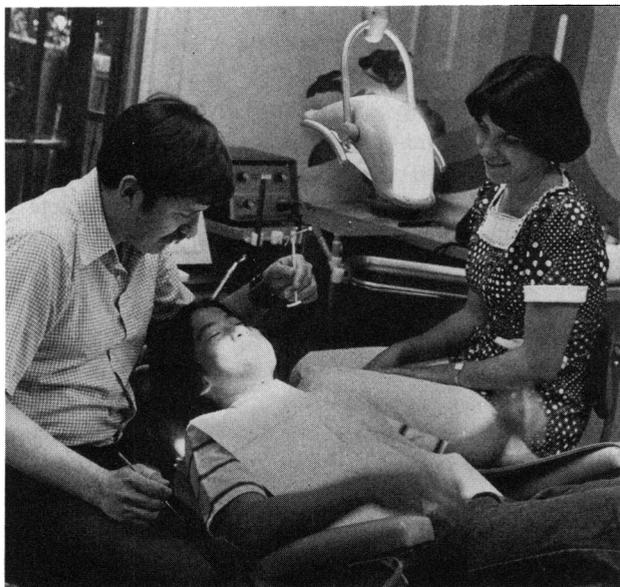
During fiscal year 1975, women who were known to be pregnant were not admitted to the Job Corps. Those who were identified as pregnant on arrival and those who became pregnant after arrival were medically terminated. (Revised regulations now permit pregnant women to be admitted provided they can complete 3 months of training before the end of the seventh month of pregnancy. Those who become pregnant after arrival may likewise remain in the Job Corps until the end of the seventh month of pregnancy.)

**Health care.** All centers have a dispensary and an infirmary. Smaller centers, particularly the rural conservation ones, are staffed only by a full-time medic or nurse or, in a few instances, by a physician's assistant. Primary medical care is usually provided at the center but may be given through arrangements with physicians and health facilities in nearby communities. A community physician supervises the services provided by the medic or nurse by telephone consultation, periodic visits to the center, and written standing orders. Larger centers have full-time nurses and may have one or more full-time physicians and dentists. However, nurses and medics provide most of the actual care at most centers. All allied health personnel work under the supervision of physicians, dentists, or mental health professionals, as appropriate.

Corpsmembers receive medical, dental, and mental health care. Each enrollee receives a cursory medical inspection within 24 hours of arrival at a Job Corps center and a complete medical examination within 2 weeks. All corpsmembers receive immunizations according to recommendations of the Center for Disease Control. Persons for whom medical problems are diagnosed are treated on an outpatient basis; when necessary, patients are referred to specialists, admitted to the infirmary, or hospitalized. Those with chronic medical problems that do not preclude program participation (for example, well-controlled diabetes or epilepsy) are managed at the center.

A program for delivering routine dental care that emphasizes preventive dentistry and oral self-care has been implemented. Emergency dental care is available at all times. A complete dental examination is given between 90 and 120 days after enrollment, and routine dental care is offered. Prosthetic appliances and some specialized services are provided when they enhance corpsmembers' employability and are within centers' budgets.

The mental health program emphasizes prevention of mental and emotional illness. Corpsmembers receive direct counseling, evaluation, and short-term treatment, when necessary.



*Corpsmember receives dental care from Job Corps dentist*

Corpsmembers with health conditions that cannot be handled by the Job Corps because they are too complicated, too long term, or too costly are medically terminated from the program and given appropriate referrals for treatment in their home community.

The major criterion for medical termination is the specification by the center physician that a health problem is such that it would interfere with the corpsmember's completion of the training program. In addition, patients requiring prolonged hospitalization are usually medically terminated, even when complete recovery is anticipated, because of budgetary and training-schedule limitations rather than health reasons. Most corpsmembers do not have health insurance and are not covered by Medicaid. The centers "self-insure" the medical care of the corpsmembers, but limited center budgets cannot accommodate catastrophic medical bills.

**Health Education.** The Job Corps Health Education Program tries to prepare corpsmembers to make responsible decisions regarding health-related matters by providing relevant, factual information. The instruction is usually given by teachers assisted by health program personnel. Corpsmembers meet once or twice a week in 2-hour sessions. The following 10 topics are discussed after an introductory session on the importance of health maintenance: nutrition; dental health; obtaining health care; love, sex, and the family; human reproduction; childbearing and childrearing; venereal disease; first aid; emotional first aid; and drugs and their misuse.

Special effort is made to gear the program to each center's specific needs regarding its particular popula-

tion. For example, materials are available in Spanish for centers with Spanish-speaking corpsmembers. Likewise, information, testing, and counseling on sickle cell trait and anemia are available for centers with largely black populations.

### **The Job Corps, Fiscal Year 1975**

**Population.** The Job Corps population's characteristics are similar to those of the populations mentioned earlier (1-5). Corpsmembers must be aged 16 through 21 and come from economically disadvantaged backgrounds to be eligible for the program. In fiscal year 1975, the year for which we collected data for analysis, about 55 percent of the corpsmembers were black, 11.5 percent were of Latin American and Caribbean origin, and 3 percent were American Indians. The population was 75 percent male. About 20,000 corpsmembers were enrolled at any one time during fiscal year 1975. Although corpsmembers could stay in training up to 2 years, their stays averaged 5½ months; thus, about 44,000 new corpsmembers entered the program that year. About 500 persons (1 percent of the 50,000 applicants) with known preexisting serious illnesses were excluded from the Job Corps for medical reasons.

During the year, corpsmembers lived at 60 residential training centers located in rural or urban areas; 10 of the urban centers also had nonresident corpsmembers who lived at home and came to the centers for training. The centers varied in size; the smallest served about 150 corpsmembers, the largest about 2,300. Although most of the centers served either men or women, 10 were coeducational.

All of the centers were operated by contractors responsible for all facets of center operation. Contractors included private profitmaking companies, nonprofit organizations (including local governments), and the U.S. Departments of Interior and Agriculture, which operated the small, rural conservation centers.

**Data.** The data discussed in this report were obtained from the Job Corps records on admissions and terminations, with the main focus on termination records. Unfortunately, records of health care given by diagnostic category were not available. Although health care use and costing records are kept, they are not categorized by diagnoses for which staff and facilities are used or costs are incurred. However, by noting the number of applicants to the Job Corps, the percentage screened out for medical reasons, and the percentage of those admitted who were later terminated for medical reasons, we believed that useful observations could be made.

All medical terminations were tabulated for the period from July 1, 1974, to June 30, 1975. The reasons for terminations were coded according to the "Inter-

national Classification of Health Problems in Primary Care" (6). This scheme was used because it permits classification of symptoms, problems, and undiagnosed categories of illness as well as diagnosed illness.

The majority of medical terminations were due to conditions corpsmembers had before they entered the Corps. This finding was determined indirectly in two ways: first, the duration of a corpsmember's stay before discharge was tabulated, and second, an informal retrospective assessment was made of diagnostic categories of termination. Based on an assessment of characteristics typical of the various conditions, health problems were grouped into those likely to have existed before enrollment and those likely to have been acquired after enrollment. This informal and qualitative procedure was not based on a review of each individual case. It was determined by our clinical experience, as well as our experience with the Job Corps health program.

## Findings

**Screening.** About 90 percent of the 44,390 applicants screened were admitted directly to the Jobs Corps as medically qualified. Of the remaining 10 percent with suspected pregnancy, illness, or disability, about 9 percent were admitted after their applications were reviewed by a medical or mental health consultant, with the expectation that the disability or condition would not interfere with the person's progress in the training program and that the Job Corps could manage his or her health care. Thus, only about 1 percent of all applicants were rejected for medical reasons.

**Terminations.** During fiscal year 1975, 816 corpsmembers—256 males and 560 females—were terminated for medical reasons; a number representing about 1.8 percent of the total number of corpsmembers admitted to the program that year. Of the 560 females, only 201 were medically terminated for reasons other than pregnancy, as shown in the following table.

<i>Terminations</i>	<i>Males</i>	<i>Females</i>	<i>Total</i>
Number for reasons other than pregnancy .....	256	201	457
Total number corpsmembers .....	32,903	11,487	44,390
Percent of total terminated .....	0.8	1.7	1.0

The medical reasons for termination are summarized in table 1, which includes major diagnostic or problem categories. Pregnancy (category 11) accounted for 43.0 percent of the terminations, and mental and emotional diseases (category 5) accounted for 32.3 percent. Only two other categories accounted for any significant number of terminations—diseases of the nervous system and sense organs (category 6, 5.0 percent) and accidents and violence (category 17, 4.2 percent).

The significance of trauma is apparent from the following causes of death—all but 1 of the 22 deaths were due to violence and emotional causes.

<i>Cause of death</i>	<i>Number</i>
Violence and emotional causes:	
Auto accident .....	7
Suicide .....	6
Drowning .....	3
Gunshot wounds .....	2
Equipment accident .....	1
Fall .....	1
Train accident (possible suicide) .....	1
Medical cause: asthma .....	1

Of the terminations, 300 occurred within 30 days of the corpsmembers' arrival at the Job Corps center; 136 were for pregnancy and 164 were for other medical reasons (table 2). All pregnancies that resulted in medical terminations within the first 30 days were considered preexisting conditions. In this admittedly arbitrary way, it was estimated that 38 percent of the pregnancies were preexisting.

Similar conclusions as to whether a condition was preexisting could not be drawn from data on nonpregnancy terminations; for these, the specific diagnostic categories were assessed. For example, schizophrenia and diabetes were assumed to be preexisting conditions. Conditions such as trauma or adolescent adjustment reaction were not considered preexisting. By use of this classification method, 291 of the 457 (63.7 percent) nonpregnancy terminations were considered to be a result of preexisting conditions. Thus, approximately 52.3 percent of all medical terminations were related to conditions considered to be preexisting; however, it does not necessarily follow that corpsmembers were aware of these conditions before their entry into the Job Corps.

A similar retrospective tabulation was made to determine how many of the terminated corpsmembers should have been screened out before enrollment by the use of a simple health history questionnaire, observation, and interview by the lay clerks who processed applications. In a few instances, severely disabled applicants and some who were blind or paraplegic had been enrolled and immediately terminated. We presume that this costly process could have been avoided if the clerk had looked closely at the applicant and noted what he or she saw.

The retrospective tabulation assessed the likelihood that the enrollees were aware of their medical problems or that their medical defects were obvious enough to be noted by a layperson, or both. People with hemophilia or diabetes are almost always aware of their condition. An obvious hearing loss or wheelchair should

Table 1. Medical reasons for termination from the Job Corps, fiscal year 1975, by major diagnostic or problem categories

Category	Number of cases	Total	
		Number	Percent
1. Infective and parasitic diseases .....		4	0.5
Tuberculosis .....	1		
Hepatitis .....	3		
2. Neoplasms .....		5	0.6
Miscellaneous benign neoplasms .....	3		
Malignant neoplasms (lymphoma, osteosarcoma) .....	2		
3. Endocrine, nutritional, metabolic problems .....		12	1.4
Diabetes .....	7		
Obesity .....	4		
Other .....	1		
4. Diseases of blood and blood-forming organs .....		7	0.8
Sickle cell disease .....	5		
Other .....	2		
5. Mental and emotional disease .....		269	32.3
Mental retardation and learning disorders .....	44		
Psychotic disorders .....	81		
Stress reactions of adolescence .....	23		
Drug abuse .....	30		
Depressive reactions .....	21		
Character and personality disorders .....	25		
Sexual deviation .....	7		
Miscellaneous and not otherwise specified .....	38		
6. Diseases of nervous system and sense organs .....		42	5.0
Epilepsy and seizure disorders .....	25		
CNS disease of various types .....	6		
Eye problems (including blindness) .....	10		
Hearing problems .....	1		
7. Diseases of circulatory system .....		10	1.2
Congenital heart disease .....	4		
Hypertension .....	3		
Other heart disease .....	3		
8. Diseases of respiratory system .....		11	1.3
Asthma .....	4		
Other respiratory diseases .....	7		
9. Diseases of digestive system .....		7	0.8
10. Diseases of genitourinary system .....		12	1.4
11. Pregnancy, childbirth, and puerperium .....		<sup>1</sup> 359	43.0
12. Diseases of skin .....		5	0.6
13. Diseases of musculoskeletal system and connective tissue .....		10	1.2
14. Congenital anomalies .....		0	0.0
15. Perinatal conditions .....		0	0.0
16. Signs, symptoms .....		31	3.7
Heart murmur or abnormal cardiac findings .....	22		
Other signs, symptoms .....	9		
17. Accidents, poisoning, and violence .....		35	4.2
Fractures of all types .....	16		
Gunshot and knife wounds .....	2		
Burns .....	2		
Other trauma and injuries .....	15		
18. Miscellaneous .....		15	1.8
Refused physical examination .....	10		
Other reasons .....	5		
<b>Total .....</b>		<b>834</b>	<b>99.8</b>

<sup>1</sup> Pregnancy.

NOTE: Totals may not add consistently because some patients had multiple diagnoses or problems.

Table 2. Medical terminations by length of stay at Job Corps centers, fiscal year 1975

Reason for termination	Number patients	Average length of stay (days) before termination	Range (days)		Stays less than 30 days	
			High	Low	Number	Percent
Pregnancy .....	359	99	766	1	136	38
Nonpregnancy .....	457	81	526	1	164	36
<b>Total</b> .....	<b>816</b>	<b>89</b>	<b>766</b>	<b>1</b>	<b>300</b>	<b>37</b>

be noted by an application clerk. Using these qualitative criteria, we estimated that 197 (24 percent) of the 816 corpsmembers who were medically terminated would not have been admitted to the program if a simple observation and interview procedure had been used correctly and if application forms had been completed accurately. Diseases considered to be congenital or hereditary (such as sickle cell anemia or mental retardation) were tabulated in a similar manner. Of the total 816 medically terminated corpsmembers, 58 (7.1 percent) had congenital or hereditary diseases. Their diagnoses were as follows.

Diagnosis	Number
Mental retardation .....	41
Congenital heart disease .....	6
Sickle cell anemia .....	5
Cerebral palsy .....	2
Bilateral cryptorchidism .....	2
Hemophilia .....	1
Ectodermal dysplasia .....	1

Health problems that are generally thought to be related to poverty or to certain racial or ethnic minority groups, or that are relatively specific to these groups, were also tabulated among medical terminations. Such problems were identified in only nine corpsmembers: five had sickle cell anemia, three had hypertension, and one had tuberculosis.

## Discussion

From observations based on the Job Corps health data, it seems that disadvantaged young people can remain relatively healthy if basic health services are provided. A supportive and structured program that includes health education, basic health care, counseling, recreation, and good nutrition appears to ameliorate the detrimental health effects of economic and social disadvantage.

Job Corps applicants are not carefully screened, nor are they selected for medical fitness. No extensive medical efforts or generous financial resources for health care are dedicated to sustaining their health. Health maintenance is not the primary goal of the Job Corps. And yet, most corpsmembers remain healthy while in the program. Less than 2 percent of all young people

(only 0.8 percent of young men) admitted to the Job Corps were terminated for medical reasons.

Little information is available on medical terminations in similar groups of young people. However, one report on academic withdrawals from 4-year colleges indicated that more than 10 percent of all student withdrawals were due to illness (7). Also, a study from the University of Maryland revealed that 10.2 percent of 175 graduate students and 13.85 percent of 924 undergraduates reported that they withdrew from the university for medical reasons in 1976 (8). Although college students come from a higher socioeconomic background than corpsmembers, the college students' medical termination rates were five times higher than that of the corpsmembers.

Young people in the armed services are probably more comparable to the Job Corps population than college students. However, no data on medical termination that could be used for comparisons were available from the Department of Defense.

The capacity of the Job Corps to maintain its members' health is even more impressive in view of the virtual absence of rigorous medical standards for admission. About 90 percent of the applicants with known or suspected disease or disability are admitted, and only about 1 percent of all candidates are denied admission for medical reasons.

One cannot be certain of the reasons for the low percentage of medical terminations among corpsmembers. However, the experience of the health personnel working with the Job Corps suggests that a basic health program that includes health care and health education can apparently ameliorate disease and sustain productivity in young people. Moreover, this program can often be provided adequately by nonphysician personnel. Most Job Corps centers are staffed by nurses, or medics, or both. A few centers have physician's assistants or nurse practitioners. These personnel conduct most of the health program activities.

A number of additional observations are suggested:

- The educational aspects of the Job Corps health program are particularly important. This is true for mental health programs that emphasize the availability of

services and attempt to remove the stigma of seeking care for emotional illness; for family planning programs that explain birth control procedures and techniques and offer sex education; and for trauma programs that emphasize accident prevention and job safety, as well as first aid. The role of health care providers as educators is important.

- A substantial portion of women become pregnant even though family planning information and services are generally available. The problem of unwanted pregnancies in the Job Corps population will not be resolved entirely through family planning information and services and the (presently restricted) availability of abortions.
- That accidents and violence often occur in emotionally disturbed persons is emphasized when one examines the causes of death in which trauma and emotional problems are often indistinguishable. Programs related to accident prevention should be coordinated with education regarding the availability of mental health services.
- Stress reactions of adolescence, alcohol and drug abuse, depressive reactions, and sexual problems constitute about one-third of all mental and emotional disorders in the Job Corps population. Many corpsmembers with these conditions could be expected to respond to sympathetic, supportive mental health services.

Finally, experience also suggests that health services need not be central to the major mission of the entire Job Corps program to be effective. Maintenance of good health in the Job Corps is possible through provi-

sion of basic health care, health education, and good nutrition. Moreover, these services can be adequately provided by allied health personnel with professional supervision. Under these conditions, almost all youths from a high-risk population remain relatively free of conditions serious enough to cause their termination from the training program.

### References

1. Brunswick, A. F., and Josephson, E.: Adolescent health in Harlem. *Am J Public Health*, supplement, October 1972.
2. Litt, I. F., and Cohn, M. I.: Prisons, adolescents and the right to quality medical care: The time is now. *Am J Public Health* 64: 894-897, September 1974.
3. Salisbury, A. J., and Berg, R. B.: Health defects and need for treatment of adolescents in low income families. *Public Health Rep* 84: 705-711, August 1969.
4. National Center for Health Statistics: Examination and health history findings among children and youth 6-17 years. *Vital and Health Statistics, Series 11, No. 129*, November 1973, pp. 22-27.
5. National Center for Health Statistics and National Center for Health Services Research: Children and youth—health status and use of health services. *In Health, United States, 1978*. DHEW Publication No. (PHS) 78-1232. December 1978, ch. 3, p. 55.
6. World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians: The international classification of health problems in primary care. *American Hospital Association*, Chicago, Nov. 7, 1974.
7. National Center for Educational Statistics: Self-reported reasons for withdrawal from higher education and re-entry patterns. *Educational Statistics, Bulletin 24*. Washington, D.C., Sept. 30, 1977.
8. University of Maryland, Office of Admissions and Registrations: Fall 1976 withdrawal office report. College Park, Apr. 4, 1977.

## SYNOPSIS

HAYMAN, CHARLES R. (Job Corps, U.S. Department of Labor) and FRANK, ARTHUR: *The Job Corps experience with health problems among disadvantaged youth. Public Health Reports, Vol. 94, September-October 1979, pp. 407-414.*

Health problems in a disadvantaged group of young people were studied by analysis of Job Corps screening and medical termination data obtained during fiscal year 1975. The Job Corps is a federally funded, residential vocational training program. During fiscal year 1975, the program was conducted in 60 centers throughout the United States. Corpsmembers (ages 16-21)

come from poverty backgrounds; in 1975, 55 percent were black.

Approximately 1 percent of applicants with serious health problems are screened out by a nonprofessional procedure. Comprehensive health services are provided to corpsmembers; however, limited funds and interference with training prevent continuing care for pregnancies and some serious illness and injuries. Corpsmembers with these conditions are terminated from the Job Corps, and arrangements are made for care in their communities.

Less than 2 percent of the corpsmembers were terminated for medical reasons during fiscal year 1975.

Pregnancy accounted for 359 terminations. Of 44,390 corpsmembers, 457 were terminated for illness or injury. The majority of these terminations were for mental health problems; trauma was the next largest category. During fiscal year 1975, 22 deaths occurred; 21 were from accidents or suicide.

The low medical termination rate among these socioeconomically disadvantaged young people suggests that maintenance of relatively good health is possible over a short period through provision of basic health care and health education, which can be provided largely by allied health personnel under professional supervision.